

CLAIMS

What is claimed is:

1. In a wireless communication system comprising a plurality of wireless local area networks (WLANs), each WLAN having a plurality of resident user equipments (UEs) communicating with a base station (BS) residing within the WLAN, a method for updating a WLAN database maintained by each BS, the method comprising:

each resident UE transmitting its geo-location information to the BS within the WLAN;

communicating by at least one UE with neighboring base stations of neighboring WLANs;

updating the WLAN database at the BS to include the geo-location information of neighboring WLANs; and

approximating coverage area of neighboring WLANs according to the geo-location information in the updated system database.

2. The method of claim 1, further comprising the BS verifying the integrity of the information transmitted by any UE.

3. The method of claim 1, where the neighboring WLAN provides coverage which does not overlap coverage of the resident WLAN.

4. The method of claim 1, further comprising:
the UE receiving traffic loading information from neighboring base stations; and
updating the WLAN database at the BS to include traffic loading information of neighboring WLANs.

5. The method of claim 1 wherein the neighboring WLANs have different radio access technology.

6. The method of claim 5 further comprising the UE providing the BS with information including radio access technology of neighboring WLANs.

7. The method of claim 1, where said UE sends information which includes signal power levels of the neighboring WLANs.

9. The method of claim 1, where the UE sends the geo-location information responsive to being authenticated by the BS.

10. The method of claim 1, where the UE transmits the geo-location information together with a message authentication code.

11. The method of claim 1, where the UE encrypts information sent to the BS.

12. The method of claim 1, further comprising:
the base station alerting the UE as to neighboring WLANs known by the base station for reducing traffic due to multiple UEs sending similar information.

13. The method of claim 12 wherein the receiving UE limits reports on neighboring base stations to those base stations that are not included in the alert received from its associated base station.